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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,627	03/16/2004	Daisuke Ishikawa	016907-1614	9696
22428	7590	10/05/2005	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			PYO, KEVIN K	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

11A

Office Action Summary

Application No.

10/800,627

Applicant(s)

ISHIKAWA ET AL.

Examiner

Kevin Pyo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 10-14 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/16/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

1. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 9, it appears that the limitation of claim 9 is inconsistent with the limitation of claim 6 on which claim 9 is dependent. More specifically, claim 9 recites “the light emission control means controls the quantity of light in one light beam from the **only one of the plurality of light sources**” and claim 6 recites “the light emission control means ... controls the quantity of light in the plurality of light beams emitted by the respective light sources”. It appears that claim 9 should depend on claim 8, since claim 8 provides a proper antecedent basis for the limitation “the only one of the plurality of light sources”. Clarification is required.

No patentability based on an art against claim 9 is applied at this time since the intended scope of claim is unclear.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 8 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Komiya et al (6,509,921).

Regarding claim 1, Komiya et al shows in Fig.3 the following elements of applicant's invention: a) light emitting means (31a-31d) for emitting a light beam; b) scanning control means (35) for controlling scanning of light beam emitted by the light emitting means; c) light quantity detecting means (38, col.7, lines 19-21) for detecting the quantity of light in the light beam emitted by the light emitting means; d) light quantity control signal output means (col.6, lines 62-65) for outputting a light quantity control signal that perform control such that the quantity of light in the light beam emitted by the light emitting means is kept fixed on the basis of a result of detection of the quantity of light in the light beam executed by the light quantity detecting means (col.16, lines 44-48); and e) light emission control means (col.7, line 19-col.8, line 11; col.8, lines 43-49) for controlling a light emission timing for the light beam from the light emitting means on the basis of image data and controlling the quantity of light in the light beam emitted by the light emitting means on the basis of the light control signal while the light emission timing is being controlled.

Regarding claim 3, the limitations therein are disclosed in col.7, line 19-col.8, line 11.

Regarding claim 8, the limitations therein are disclosed in col.8, lines 43-65.

Regarding claim 15, Komiya et al shows in Figs.1 and 3 an image forming apparatus (2) comprising a light beam scanning apparatus (13) and image forming means (14; col.5, lines 10-35).

4. Claims 1, 3, 6, 7 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Komiya et al (6,344,866).

Regarding claim 1, Komiya et al shows in Figs. 2 and 4 the following elements of applicant's invention: a) light emitting means (31a-31d) for emitting a light beam; b) scanning

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control means (35) for controlling scanning of light beam emitted by the light emitting means; c) light quantity detecting means (38, col.6, lines 15-17) for detecting the quantity of light in the light beam emitted by the light emitting means; d) light quantity control signal output means (col.6, lines 49-53) for outputting a light quantity control signal that perform control such that the quantity of light in the light beam emitted by the light emitting means is kept fixed on the basis of a result of detection of the quantity of light in the light beam executed by the light quantity detecting means (col.12, lines 20-23); and e) light emission control means (col.6, line 49-col.7, line 15; col.4, line 66-col.5, line 12) for controlling a light emission timing for the light beam from the light emitting means on the basis of image data and controlling the quantity of light in the light beam emitted by the light emitting means on the basis of the light control signal while the light emission timing is being controlled.

Regarding claims 3 and 7, the limitations therein are disclosed in col.6, line 49-col.7, line 15 and col.4, line 66-col.5, line 12.

Regarding claim 6, the limitations therein are disclosed in col.7, lines 1-15.

Regarding claim 15, Komiya et al shows in Figs.1 and 4 an image forming apparatus (2) comprising a light beam scanning apparatus (13) and image forming means (14; col.4, line 62-col.5 line 19).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Komiya et al (6,509,921) in view of Sakakibara et al (6,549,265).

Regarding claim 2, although Komiya et al discloses that a signal from the light detection apparatus (38) is used for controlling emission power of the light emitting means and the light emission timing (col.7, line 23-30), it does not specifically mention that two different light controlling operations were performed at the time an image is formed and at the time no image is formed respectively. However, Sakakibara et al discloses the idea of performing APC (auto power control) on both the low level of the light output which is an emission level at the time no image is formed and the high level which is an emission level at the time an image is formed in view of making the light emission level remain unchanged with variations in temperature (col.7, line 53-60). It would have been obvious to one of ordinary skill in the art to utilize the teaching of Sakakibara et al in the device of Komiya et al in view of making the light emission level remain unchanged with variations in temperature.

7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komiya et al (6,509,921).

Regarding claims 4 and 5, although the light emission control means of Komiya et al does not specifically mention that it compensates a rising delay or a trailing delay, it is well known in the art to control a timing in which a driving current is supplied to a light source in view of compensating a rising delay and/or trailing delay and thereby improving the image quality. It would have been obvious to one of ordinary skill in the art to modify the light

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emission control means of Komiya et al to control a driving current timing in view of preventing the deterioration of the image quality caused by a rising and/or trailing delay.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Pyo whose telephone number is (571) 272-2445. The examiner can normally be reached on Mon-Fri (with flexible hour), First Mon. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin Pyo
Primary Examiner
Art Unit 2878

Pkk
9/28/05